

Aberystwyth University

Does the host match the content? A taxonomical update on online consumption communities

Breitsohl, Jan; Dowell, David; Kunz, Werner H.

Published in:

Journal of Marketing Management

DOI:

[10.1080/0267257X.2015.1036102](https://doi.org/10.1080/0267257X.2015.1036102)

Publication date:

2015

Citation for published version (APA):

Breitsohl, J., Dowell, D., & Kunz, W. H. (2015). Does the host match the content? A taxonomical update on online consumption communities. *Journal of Marketing Management*, 31(9-10), 1040-1064.
<https://doi.org/10.1080/0267257X.2015.1036102>

General rights

Copyright and moral rights for the publications made accessible in the Aberystwyth Research Portal (the Institutional Repository) are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Aberystwyth Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Aberystwyth Research Portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

tel: +44 1970 62 2400

email: is@aber.ac.uk

Does the host match the content? A taxonomical update on online consumption communities

Abstract This article proposes a taxonomy of online consumption communities in order to address this rather ambiguously conceptualised research field. Specifically, inter-community differences are investigated with regard to how content focus (brand versus activity) and its congruency with the type of host (doubled versus mixed) affect consumers' posting behaviour. Based on an online survey ($n = 888$), a series of regressions of various benefits on posting behaviour supports the usability of the proposed taxonomy. In particular, social benefits had the strongest effect on consumers' posting behaviour across all communities, while the effects of functional, altruistic and sharing benefits varied in significance and direction of influence when accounting for the different community characteristics. These findings help marketing managers to design online communities and motivate consumers to contribute.

Introduction

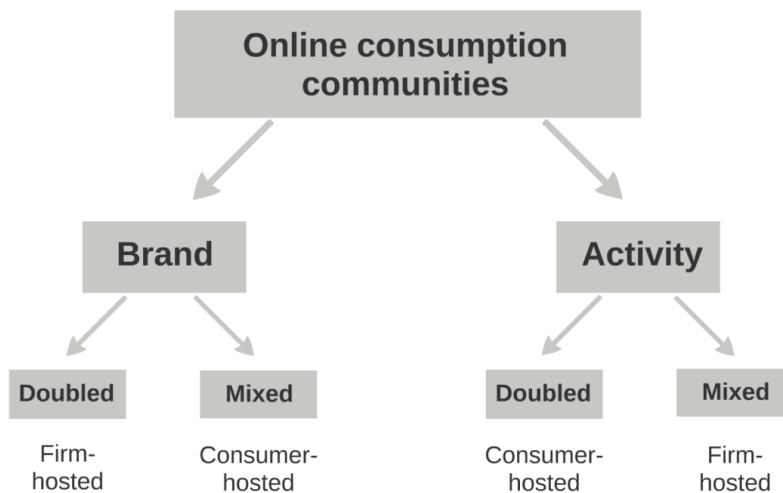
A fundamental principle of social science is the idea that humans are social animals. Consumer researchers thus increasingly focus on the social context of consumption practices, including subcultures, tribes and communities (Dholakia & Reyes, 2013; Hamilton & Hewer, 2010). With the ever greater importance of online social media as means for consumers to express their 'virtual selves' (Belk, 2014a), more and more research is investigating online communities and their effects on consumers' identification with groups, social norms and perceived empowerment (Harwood & Garry, 2010; Matzler, Pichler, Füller, & Mooradian, 2011; Moraes, Carrigan, & Szmigin, 2012; Phillips & Broderick, 2014). Moreover, the absence of demographic boundaries on the Internet has enabled consumers to choose their social groups more consciously, as suggested by social categorisation theory (King et al., 2013; Ren, Kraut, & Kiesler, 2007; Ren et al., 2007).

For marketers, this social shift has created opportunities to help and guide consumers during their selection and categorisation processes by designing suitable social platforms online. The resulting online consumption communities allow marketing researchers, and particularly netnographers, ready access to information about consumers within authentic social micro-environments (Croft, 2013; Grant, Clarke, & Kyriazis, 2011). In addition to their role as sources of marketing intelligence, online communities are of further benefit to marketers since consumers' community participation positively influences purchase intentions, brand engagement, word-of-mouth behaviour, brand loyalty and sponsorship revenue (Drennan & Cornwell, 2004; Jahn & Kunz, 2012; Kim, Choi, Qualls, & Han, 2008; O'Sullivan, Richardson, & Collins, 2011; Papagiannidis, Pantano, See-To, & Bourlakis, 2013).

The growing popularity of online consumption communities as a research area has, however, led to a wide variety of different communities all being subsumed under the same umbrella concept. For example, studies of consumer-initiated forums about a symphony orchestra or health-care issues (Laing, Keeling, & Newholm, 2011; O'Sullivan, 2010) are assumed to exhibit the same inherent social processes as company-owned brand pages which focus on Canon cameras or Apple computers (Muniz & Schau, 2005; Zaglia, 2013). Several authors (e.g. Kim et al., 2008; Kozinets, 1999; Quinton, 2013; Wirtz et al., 2013) have challenged such an all-encompassing conceptualisation and called for the comparison of inter-community differences in relation to whether a community is based around a singular brand (brand communities) or a more generic consumption activity (activity communities). Other studies have suggested that differentiation is needed between online communities that are hosted by a consumer and those that are hosted by a firm (e.g. (Dholakia, Blazevic, Wiertz, & Algesheimer, 2009; Wiertz & de Ruyter, 2007)). This view has also recently been supported in IT- and cyber-psychological research (Jang, Olfman, Ko, Koh, & Kim, 2008; Lee, Kim, & Kim, 2011). Despite on-going scholarly appeals for comparative studies that investigate and potentially combine different community characteristics in an integrated framework (e.g. Howard, 2014; Wirtz et al., 2013), such an undertaking has not yet to the authors' knowledge been conducted.

This study therefore seeks to provide an empirically grounded taxonomy that encompasses two levels of inter-community difference. The first compares communities in relation to their content focus (brand versus activity communities), and the second investigates the relationship of brand and activity communities to their type of host (consumers- versus firm-hosted communities). The resulting four-way community typology – firm-hosted brand communities, consumer-hosted brand communities, firm-hosted activity communities and consumer-hosted activity communities – is then collapsed into a two-way typology: doubled versus mixed communities. Figure 1 illustrates the proposed taxonomy. In line with social categorisation theory, it is proposed that communities with reinforcing characteristics (doubled communities) differ significantly from communities with contradictory characteristics (mixed communities).

Figure 1 Taxonomy of online consumption communities.



To test these inter-community differences, the effects of social, functional, altruistic and sharing benefits on consumers' posting behaviour are investigated at both levels. A series of regressions provide empirical support for the taxonomy and emphasise the importance of differentiating among online consumption communities in order to avoid statistical misrepresentation. In particular, the previously established effects of all four perceived benefits on posting behaviour (e.g. Chan & Li, 2010; Dholakia et al., 2009; Ma & Chan, 2014) are challenged as they were found to disappear or become significantly weaker in mixed communities. The equally established assumption of altruistic benefits having a positive effect on posting behaviour (e.g. Baytiyeh & Pfaffman, 2010; Utz, 2009) was either not confirmed (in the case of activity and mixed communities) or was found to be negative (in the case of brand and doubled

communities). The present findings provide *post-hoc* explanations for inconclusive or contradictory findings in prior research and allow future studies to engage in more refined analyses by differentiating between communities according to the taxonomy suggested here.

Theoretical background and hypotheses

Online consumption communities

Following Preece and Maloney-Krichmar (2003), an online consumption community is defined as an Internet-based group of consumers who interact around a shared consumption purpose, interest or need. The concept encapsulates brand, open-source and fan-page communities (Bagozzi & Dholakia, 2006a; Stokburger-Sauer, 2010) but is distinct from employee-based communities of practice, social networks, avatar-based virtual worlds or transaction-based websites (Barnes & Mattsson, 2011; Zaglia, 2013). Until now, most scholarly attention has focused on brand communities (e.g. Algesheimer, Dholakia, & Herrmann, 2005; Schau, Muniz, & Arnould, 2009), although a few studies have explored activity communities (e.g. de Valck, van Bruggen, & Wierenga, 2009; Dholakia et al., 2009; Wiertz & de Ruyter, 2007).

Regardless of the type of community, scholars broadly agree that consumers' posting behaviour represents the ultimate success metric (Kim et al., 2008; Ren et al., 2007). Posting content is the fundamental basis for a community's continued existence and crucial for attracting new members (de Valck et al., 2009; Matzler et al., 2011; Porter & Donthu, 2008). Posting behaviour can be defined as the frequency with which a consumer adds content to a given online community. Actual online behaviour often differs greatly from planned behaviour, which explains calls for the measurement of actual posting behaviour rather than the assessment of posting intentions or the use of amalgamated participation/engagement constructs (Adjei, Noble, & Noble, 2010; Lee et al., 2011). Following prior research (e.g. Chiu, Hsu, & Wang, 2006; Wiertz & de Ruyter, 2007), posting behaviour is adopted as a key dependent variable in the present study.

Understanding the forces that motivate posting behaviour has gained additional importance as research continues to report that most members of online consumption communities never contribute content but merely engage in lurking behaviour (Schlosser, 2005; Schneider, von Krogh, & Jäger, 2013). Accordingly, this study analyses four perceptual factors that have consistently predicted consumers' posting behaviour in previous research, namely social and functional benefits (Dholakia, Bagozzi, & Pearo, 2004; Dholakia et al., 2009; Hung, Li, & Tse, 2011; Jin, Park, & Kim, 2010; Wang & Fesenmaier, 2004), altruistic benefits (Baytiyeh & Pfaffman, 2010; Chan & Li, 2010; Lee et al., 2011; Utz, 2009) and sharing benefits (Chiu et al., 2006; Lee, Park, & Han, 2014; Ma & Chan, 2014; Park, Gu, Leung, & Konana, 2014). These four constructs were chosen since they reflect the key dichotomy of self-focused

versus other-focused aspects in human motivation theories (Deutsch & Gerard, 1955). Social and functional benefits represent self-focused concepts, whereas sharing and altruistic benefits are other-focused concepts (Barasch & Berger, 2014; Baytiyeh & Pfaffman, 2010; Chiou & Lee, 2013; Utz, 2009).

Social benefits can be defined as the perceived value that a consumer gains from socialising and networking in an online consumption community (Dholakia et al., 2009). Previous studies indicate that a consumer who values social interactions and relationships within a community is likely to post more content (Ling et al., 2005; Ren et al., 2007). Functional benefits represent consumers' perceptions that the information received from a community is beneficial in addressing a given informational need (Archer-Brown, Piercy, & Joinson, 2013). Prior research has shown that if the information in a community is perceived to be highly beneficial, consumers may not believe that their comments are necessary and thus refrain from posting further content (Casaló, Flavián, & Guinalíu, 2013; Jang et al., 2008). As such, consumers may have lower perceptions of their own expertise and informational efficacy if the content in a community is of high quality (Adjei et al., 2010; Hsu, Ju, Yen, & Chang, 2007; Kankanhalli, Tan, & Wei, 2005; Shen, Huang, Chu, & Liao, 2010).

Sharing benefits reflect consumers' expectations about the positive consequences of their posting behaviours for an online community (Huang, Kim, & Kim, 2013). This is based on the belief that knowledge sharing helps a community to grow (Belk, 2014b; Ma & Chan, 2014). Several studies report that sharing benefits foster consumers' online posting behaviour (Chiu et al., 2006; Lee, et al., 2014; Park et al., 2014). Altruistic benefits, meanwhile, refer to the perceived reward from helping others (Mowen & Sujan, 2005). As such, giving advice can be seen as a form of interpersonal altruism (Jeppesen & Frederiksen, 2006; Podsakoff, MacKenzie, Paine, & Bachrach, 2000) and has been found to exert a positive effect on posting behaviour in online consumption communities (Baytiyeh & Pfaffman, 2010; Utz, 2009; cf. Zhao, Stylianou, & Zheng, 2013). Although altruism resembles sharing in its underlying intent to help others, it is grounded in a more ideology-driven belief system related to acts for the greater good which goes beyond the community-specific outcome expectations included in sharing (Baytiyeh & Pfaffman, 2010; de St Aubin, 1996; Peterson, 1993). Several authors have therefore suggested that general altruism should be distinguished from community-specific altruism to help clarify the inconclusive findings of past research (Hsu et al., 2007; Kuo & Young, 2008; Xu & Li, 2014).

Taken together, the following hypotheses have been developed:

H1a-1d: (a) Social, (b) altruistic and (c) sharing benefits have positive effects on posting behaviour, but (d) functional benefits has a negative effect

Taxonomic level 1: Content focus

In line with past research, the content focus of an online community depends on whether it is based around a brand or a consumption activity (Kozinets, 1999; Muniz & Schau, 2005). Thus, an online brand community is an Internet-based group of consumers united by their shared enthusiasm for a singular brand (McAlexander, Schouten, & Koenig, 2002), while an online activity community is an Internet-based group of consumers united by the shared enthusiasm for a singular consumption activity (Kozinets, 1999). Although previous studies of online communities have highlighted the conceptual differences, an empirical investigation of the differences between these two types of community has not so far been conducted (Kozinets, 1999; Wiertz & de Ruyter, 2007; Wirtz et al., 2013).

In order to further corroborate the rationale for this paper, four points of distinction derived from extant theory are proposed. First, an inter-community difference arises in members' attitudes toward commercial values (Porter, 2004). On one hand, brand communities contain an inherent commercial element, where brand ownership functions as indicator of members' sufficient spending power (Burgh-Woodman & Brace-Govan, 2007). On other hand, activity communities embrace more non-monetary, egalitarian values and may even incorporate anti-commercial belief systems (Cova & White, 2010). Accordingly, promotional messages and the corporate utilisation of community content are implicitly accepted within brand communities (Hansen, 2013), whereas activity communities tend to exhibit a more independent, consumer-to-consumer interaction culture (Bagozzi & Dholakia, 2006a; Campbell & Jovchelovitch, 2000; Chau & Xu, 2007).

Secondly, communities differ in the explicitness of their in- and out-groups (Castano, Yzerbyt, Bourguignon, & Seron, 2002; Park & Rothbart, 1982). Burgh-Woodman and Brace-Govan (2007) observe that brand communities adopt a mainstream orientation, such that members actively strive to exclude sub-cultural ideologies and challenging posts from declared out-groups. With their broader scope and greater normative diversity, activity communities tend to be more tolerant and open to newcomers and heterodox opinions (Burke, Kraut, & Joyce, 2009; Rink & Ellemers, 2009).

Thirdly, relative to the diversity in community content (Wirtz et al., 2013), thematic contributions in brand communities are generally more specific and tend to feature insider terminology to reinforce the homogeneity of existing brand values and in-group stability (Chiu et al., 2006; Schouten, McAlexander, & Koenig, 2007). In contrast, activity communities often contain more diverse, off-topic content provided by many different members and tend to exhibit greater membership turnover (Joyce & Kraut, 2006; Ren et al., 2007; Schwämmlein & Wodzicki, 2012).

Fourthly, online consumption communities differ in the length or persistence of their conversations (Zhao et al., 2013). Brand communities exhibit more on-going discourse, as regular members seek to reinforce their identification with the brand and community (Huang, 2010; Stokburger-Sauer, 2010). In

activity communities, in contrast, interactions tend to be less regular and content less often relates to previous conversations (Coleman, 1988; Nahapiet & Ghoshal, 1998).

These differences imply several variations in consumers' perceived benefits and posting behaviour. In particular, social benefits are expected to have a stronger effect on posting behaviour in brand communities as compared to activity communities. A brand reinforces a set of values that foster in-group identification (Elsbach & Bhattacharya, 2001), so that brand communities resemble social meetings of like-minded acquaintances (Algesheimer et al., 2005; Zaglia, 2013). In activity communities, the greater turnover and heterogeneous conversation topics seem more similar to one-off meetings with strangers who happen to share some general interest (de Valck et al., 2009; Mathwick, Wiertz, & de Ruyter, 2008).

Functional benefits are similarly likely to exert a stronger influence on consumers' posting behaviour in brand communities than in activity communities. The on-going discussions and insider information that characterise brand communities possibly foster consumers' perceptions of the superior expertise of others, thus inhibiting their posting behaviour (Jang et al., 2008; McEvily, Perrone, & Zaheer, 2003). In comparison, empirical studies of activity communities report inconclusive or insignificant effects of functional benefits on posting behaviour (Park et al., 2014; Tonteri, Kosonen, Ellonen, & Tarkiainen, 2011; Tsai & Pai, 2013) which could potentially be due to the weaker normative bonding and lack of conversational persistence.

With regard to sharing benefits, past research suggests that consumers' posts in heterogeneous communities have less impact on the community as a whole, leading members to perceive their sharing efforts as having little influence on the overall growth in knowledge in the community (Chen & Hung, 2010; Sassenberg, 2002; Schwämmlein & Wodzicki, 2012; Yen, Hsu, & Huang, 2011). Studies by Hsu et al. (2007) as well as Lai and Chen (2014), which were conducted across several activity communities with a different content focus, indicate that, for the same reason, such an imbalance makes posting behaviour less worthwhile an undertaking. In comparison, members of brand communities perceive themselves as appreciated insiders and expect the community to benefit from their sharing efforts (Bhattacharya & Sen, 2003). Chiu et al. (2006) and Zaglia (2013) argue that the diverse, off-topic content that tends to take place in activity communities makes members perceive their shared contributions as being less useful than members of thematically more focused brand communities. Thus, sharing benefits are likely to have a stronger effect on posting behaviour in brand communities in comparison to activity communities.

Finally, altruistic benefits are expected to be a stronger predictor of posting behaviour in brand communities than in activity communities. Research suggests that altruistic consumers who contribute to online communities are likely to demand some form of reciprocity (Chan & Li, 2010; Mathwick et al., 2008; Wiertz & de Ruyter, 2007), and this is likely to be stronger in more homogenous brand communities. In addition, more consistent discussions among smaller in-groups (as evidenced in brand communities) foster altruistic benefits (Ma & Chan, 2014). Inclusive fitness theory (Eberhard, 1975; Hamilton, 1964)

further supports a stronger impact in brand communities insofar as it predicts that perceptions of altruistic benefits grow stronger if a community comprises members with similar personal values (Oreg & Nov, 2008), allows for social comparisons (Harper, Konstan, & Li, 2010) and evidently includes a large number of long-term participants (Zhao et al., 2013). Accordingly, the following is predicted:

H2a-2d: The effects of (a) social, (b) altruistic, (c) sharing and (d) functional benefits on posting behaviour are stronger in brand communities than in activity communities

Taxonomic level 2: Type of host

The second level of distinction relates to communities' type of host. In line with previous research (Casaló, Flavián, & Guinalíu, 2010; Wirtz et al., 2013), it is suggested that the distinction between an online community that is hosted by a consumer and one that is hosted by a firm will significantly influence members' perceived benefits of posting content online. Miller, Fabian and Lin (2009), for instance, propose that community members vary in the extent to which they appreciate active corporate involvement in their online interactions. While some researchers note the effectiveness of actively managing consumers' communication online (Dholakia et al., 2009; Godes et al., 2005; Porter & Donthu, 2008), others recommend more subliminal approaches (Dellarocas, 2006; Thompson, 2005). Hosting communities is of undoubted benefit to firms as they gain valuable consumer feedback, improve their service quality, undertake relationship management and gather information for algorithmic profiling (Gadalla, Keeling, & Abosag, 2013; Jung, Ineson, & Green, 2013; Wang, Jiao, Abrahams, Fan, & Zhang, 2013). Consumers may however reject such corporate community management out of increasing concern for online privacy, a lack of identification with the firm, or general repudiations of corporate authority (Bhattacharya & Sen, 2003; Fogel & Nehmad, 2009; Scaraboto, Carter-Schneider, & Kedzior, 2013).

Three studies have so far empirically compared samples from firm-hosted and consumer-hosted communities. No conclusive evidence of inter-community differences has been found in relation to perceived communication quality, uncertainty reduction (Adjei et al., 2010), interaction continuity or perceived rewards (Jang et al., 2008). Marginal differences were however found for content quality, social benefits (Lee et al., 2011) and commitment (Jang et al., 2008). These rather inconclusive findings appear to be the result of small samples and measures of community members' intentions rather than actual behaviour. It can further be argued that some of these results could stem from the lack of distinction with regard to the content focus of the utilised communities.

This study differentiates between four combinations of online consumption communities in relation

to both their type of host and content focus: firm-hosted brand communities, consumer-hosted brand communities, firm-hosted activity communities and consumer-hosted activity communities. Since existing research on these combinations is scarce and purely conceptual in nature (Howard, 2014), meaningful hypotheses for each of the four possible combinations cannot be derived at this moment in time. Instead, the combinations are grouped into doubled and mixed communities to provide more theoretically viable hypotheses, in line with Wirtz et al.'s (2013) suggestion of combining key community characteristics as an initial taxonomic foundation for future research. The theoretical rationale behind this derives from social categorisation theory, which describes the human ability to engage in multiple categorisation processes when associating with social groups (Crisp & Hewstone, 2007). In addition, cross-categorisation theory indicates that the identification with the group and subsequent behavioural effects will be strengthened if group members perceive two categories to reinforce each other, i.e. they are 'doubled' communities (Migdal, Hewstone, & Mullen, 1998; Vanbeselaere, 1991). Likewise, members' identification with the group will be diminished if two categories are perceived to be mixed or contradictory, i.e. 'mixed' communities.

It is thus proposed that consumer-hosted activity communities and firm-hosted brand communities are doubled communities since they carry reinforcing characteristics. In other words, it is expected that the easily discernible purpose and nature of these communities provide members with more certainty and transparency about the community's identity (Palmer & Huo, 2013; Ren et al., 2007), hence strengthening the effect of perceived benefits onto their posting behaviour. A firm that hosts a professionally maintained brand community clearly conveys its commercial, mainstream-oriented nature and openly communicates its intent to provide and manage related content (Burgh-Woodman & Brace-Govan, 2007; Porter & Donthu, 2008). Wiertz and de Ruyter (2007) even suggest that members of firm-hosted communities are aware of and inherently tolerate corporate marketing practices, leading them to expect a certain degree of information and service provision. In addition, customers purposefully seek and join firm-hosted communities to gain assurance about a purchased brand (Carlson, Suter, & Brown, 2008; Ouwersloot & Odekerken-Schröder, 2008). Likewise, consumer-hosted activity communities unambiguously represent non-commercial platforms with a diversity of members and topics (Cova & Pace, 2006; Cova & White, 2010). Without any imposing corporate authority, such communities foster consumer co-production, as consumers do not fear the potential appropriation of their provided content (Gebauer, Füller, & Pezzeri, 2013).

In contrast, firm-hosted activity communities and consumer-hosted brand communities send mixed signals. The opacity of their nature and purposes is likely to hinder consumers' identification with the group and their motivation to post content (Porter & Donthu, 2008). In firm-hosted activity communities for example, consumers cannot determine the extent to which a company influences content in favour of its own brands, events or retail offers (Dholakia et al., 2009). Jang et al. (2008) predict that consumers feel

limited in their freedom of expression if the hosting firm is suspected of removing disadvantageous content. Members in consumer-hosted brand communities might also speculate about whether the host is a sponsored brand advocate (Cova & White, 2010). Moreover, it has been suggested that ambivalent source credibility results in consumers who lurk and join the community solely to access mandatory web services without any actual intentions to post content (Jang et al., 2008). Therefore, both mixed communities may limit consumers' posting behaviour. The following hypothesis is thus put forward:

Hypothesis 3a-3d: The effects of (a) social benefits, (b) altruistic, (c) sharing and (d) functional benefits on posting behaviour are stronger in doubled than in mixed communities

Method

Consistent with previous studies (e.g. Casaló et al., 2010), data was collected using a non-probability, convenience sampling approach. For this purpose, an online survey containing all constructs under investigation was designed using Qualtrics survey software. To verify item comprehensibility and instrument consistency, the survey was pre-tested by 17 students who regularly visit online communities. After minor amendments with regard to the wording and font size, a link to the survey was placed in online communities for a period of three weeks. Following Ridings (2002) as well as Ridings, Gefen, and Arinze (2006), to ensure selection randomness a cohort of 14 business students was asked to indicate 10 online consumption communities which they had visited most regularly in the three-month period prior to data collection. The candidate communities were deemed suitable for inclusion if they exhibited a sufficient level of activity, which was deemed to be the case if a community contained a minimum of 10 posts per day by at least 15 different members for each of three days chosen at random (Ridings, 2002). Two researchers independently classified the resulting 35 communities according to their content focus and type of host, and then compared their results (Wiertz & de Ruyter, 2007). The final selection of communities focused on a wide variety of topics including sports, cars, computers, video games, fashion, books, music, movies, education, food, and family. An example alongside a description of each type of community is illustrated in Table 1.

Table 1 Sample communities and description.

Community type	Definition	Sample community
Online brand community	An Internet-based group of consumers in which the content of interactions is focused on a single brand.	<i>hyundaicoupeownersclub.co.uk:</i> A community in which consumers post about the car brand, 'Hyundai. Topics include related brand events, Hyundai car clubs, spare parts and technical advice.
Online activity community	An Internet-based group of consumers in which the content of interactions is focused on a single consumption activity.	<i>www.emmasdiary.co.uk/forums:</i> A community in which consumers post about any activities in relation to babies. Topics include baby-product recommendations, ideas for baby names and immunisation advice.
Doubled community	An Internet-based community where the host of the community is congruent with the focus of the content.	<i>a) community.sigames.com:</i> A community, hosted by the computer game firm Sports Interactive Inc. (SI), in which consumers exclusively post about games produced by SI. <i>b) thesnookerforum.co.uk</i> A community, hosted by consumers, in which the content focuses on all activities in relation to playing snooker.
Mixed community	An Internet-based community where the host of the community is incongruent with the focus of the content.	<i>a) sparkpeople.com/myspark/mycommunity.asp</i> A community, hosted by the medical advice firm Sparkpeople Inc., in which consumers post about all activities in relation to healthy lifestyles, fitness and nutrition. <i>b) audiaddict.net</i> A community, hosted by consumers, in which the content exclusively focuses on the car brand Audi.

A total of 41 participants were excluded from the initial response pool because they failed to identify the type of community host correctly in a screening question, and a further 12 participants were excluded because of missing values, resulting in an ultimate data set of 888 questionnaires. In this data set, 423 respondents were involved in activity communities (164 firm-hosted, 259 consumer-hosted) and 465 in brand communities (262 firm-hosted, 203 consumer-hosted). As in previous studies (e.g. Tonteri et al., 2011; Wiertz & de Ruyter, 2007), the participants were mostly men (66.9%), who had an average age of 38.5 years, had mostly been a community member for at least a year (80.4 %), and contributed an average of 2.4 posts per week with a median of once per week. 23.6% of the sample reported to post once per day (i.e. variation ratio = 1 – mode = .764). Details of the final sample characteristics are indicated in Table 2.

Table 2 Sample characteristics.

	Male	Female
Gender	594 (66.9%)	294 (33.1%)
Age	70 (11.8%)	30 (10.2%)
21 and under		
22 to 34	194 (32.7%)	137 (46.6%)
35 to 44	106 (17.8%)	34 (11.6%)
45 to 54	112 (18.9%)	56 (19%)
55 to 64	88 (14.8%)	27 (9.2%)
65 and over	24 (4%)	5 (1.7%)
Community visits per week (mean)	5.40	5.40
Community posts per week (mean)	2.60	2.10
Community membership in years (mean)	3.20	3.10

For the measurement constructs, all items in the questionnaire were taken from established scales (see Appendix 1). The social and functional benefits were based on Dholakia et al. (2009), each measured by three items. Price, Feick, and Guskey's (1995) four-item scale was used to capture altruistic benefits; the four items that measure sharing benefits were from Chiu et al. (2006). These items were all based on five-point Likert scales (1 = 'strongly disagree', 5 = 'strongly agree'), while consumers' posting behaviour was operationalised with one item adopted from Dholakia et al. (2004) which read 'How often do you post in this community?' (1 = 'never', 7 = 'daily'). According to Bagozzi and Yi's (1988) approach, the measures indicated acceptable psychometric properties for all constructs (see Table 3). In our assessment of convergent validity, the exploratory factor analysis revealed a KMO of .84 and a significant Bartlett's test of sphericity ($p < .001$). A four-factor solution with Eigenvalues greater than 1 emerged, which explained

70.1% of the data. All factor loadings were greater than .6 (Hair, Black, Babin, & Anderson, 2009). The Cronbach's alpha of all constructs exceeded .7. Each independent construct exhibited an average variance extracted (AVE) of .5 or more and thus all constructs were considered suitable for further analyses. Finally, discriminant validity was established since each construct's AVE was greater than its respective squared correlation (Fornell & Larcker, 1981).

Table 3 Psychometric properties of constructs.

	Construct	α	AVE	Mean	SD	1	2	3	4	5
1	Social benefits	.73	.51	3.69	.93	.71				
2	Functional benefits	.84	.65	4.20	.80	.40	.81			
3	Sharing benefits	.87	.63	3.68	.87	.51	.38	.79		
4	Altruistic benefits	.77	.53	3.89	.70	.33	.24	.40	.73	
5	Posting behaviour	-	-	2.40	2.70	.41	.14	.36	.13	-

Notes α = Cronbach's alpha, AVE = average variance extracted, SD = standard deviation. Bold values on the diagonal represent the square root of the AVE; values below the diagonal represent the constructs' correlation values.

Results

A series of ordinary least square regressions was used to test the proposed hypotheses. Following prior research on online consumption communities (Benlian & Hess, 2011; Burke et al., 2009; Kankanhalli et al., 2005), gender, age and membership duration were employed as control variables. None of the independent variables in any of the estimated regression models indicated multi-collinearity (i.e. VIF < 10). Missing values were addressed by using the list-wise deletion method, resulting in a final sample size of 888. The first regression for the overall data set was conducted in order to explore the effects of consumers' perceived benefits on posting behaviour. Posting behaviour is measured on a 7-point Likert scale and treated as continuous variable as suggested in prior research (Glass, Peckham & Sanders, 1972). All four constructs exhibited significant effects, but the sign for altruistic benefits (H1b) was surprisingly

opposite to its predicted direction, with a negative effect on consumers' posting behaviour ($\beta = -.07, p < .05$). H1a, H1c and H1d were all however supported, with social ($\beta = .34, p < .001$) and sharing ($\beta = .24, p < .001$) benefits both having a positive effect, and functional benefits ($\beta = -.07, p < .05$) exerting a negative effect.

The next set of regressions took the community's content focus into account. Differences in the strength of the effects between brand and activity communities were verified using a z-test (Paternoster, Brame, Mazerolle, & Piquero, 1998). In support of H2a, H2b and H2c, the effects of social ($\beta = .25$ vs. $.4; z = 3.11, p < .001$), altruistic ($\beta = -.02$ vs. $-.1; z = 2.06, p < .05$) and sharing ($\beta = .14$ vs. $.31; z = 3.54, p < .001$) benefits on posting behaviour were stronger in brand communities than in activity communities. However, contrary to H2d, functional benefits did not appear to differ between activity and brand communities as the effect difference was found to be insignificant ($\beta = -.06$ vs. $-.08; z = .73, p > .1$).

The final set of regressions was intended to compare doubled with mixed communities. Since the four predictors of posting behaviour unanimously exhibited stronger effects in doubled communities than in mixed communities, all hypotheses (H3a-H3d) for the taxonomic level 2 were confirmed. Functional ($\beta = 0$ vs. $-.14; z = 3.03, p < .01$) and altruistic ($.11$ vs. $-.17; z = 5.74, p < .001$) benefits had a significantly stronger influence on posting behaviour in doubled communities than in mixed communities, in which both effects became insignificant. While social ($\beta = .2$ vs. $.4; z = 3.37, p < .001$) and sharing ($\beta = .12$ vs. $.3; z = 2.99, p < .01$) benefits remained a significant influence on posting behaviour in mixed communities, the effect was significantly stronger in doubled communities. Table 4 provides a summary of the final results.

Table 4 Ordinary least square regressions.

	Overall	<i>Taxonomic level 1</i>		<i>Taxonomic level 2</i>	
		Activity	Brand	Mixed	Doubled
Social benefits	.34***	.25***	.40***	.20***	.40***
Functional benefits	-.07*	-.06	-.08	.00	-.14***
Sharing benefits	.24***	.14*	.31***	.12*	.30***
Altruistic benefits	-.07*	-.02	-.10*	.11	-.17***
<i>Control Variables</i>					
Gender	-.07*	-.15**	-.02	-.14**	-.02
Age	-.04	.04	-.05	.06	-.08*
Membership duration	.08**	.12*	.04	.19***	-.08*
R ²	.22	.15	.31	.20	.31
Adjusted R ²	.21	.14	.30	.18	.30
F	34.9	10.7	30.0	12.6	33.1
p	.00	.00	.00	.00	.00
n	888	423	465	367	521

* $p < .05$. ** $p < .01$. *** $p < .001$. *n.s.* = non-significant

Notes: Dependent variable: posting behaviour; Standardized coefficient estimates

Discussion

The aim of this study was to develop an overall taxonomy of online consumption communities. The findings confirm the suggested taxonomy by highlighting the differences in relation to a communities' content focus (brand versus activity) and its congruency with the type of host (doubled versus mixed). In particular, it is shown that these inter-community differences affect the extent to which several perceived

benefits predict consumers' posting behaviour. Using this taxonomy, practitioners will be able to gain useful information on the design and management of online consumption communities.

Theoretical implications

The results of this study confirm the validity of the proposed taxonomy, as effect patterns indicate significant differences across the two taxonomic levels. These findings offer an empirical verification of recent studies which have advocated the view that consumers' posting behaviour and perceived benefits differ in relation to the distinct characteristics of online consumption communities (Howard, 2014; Quinton, 2013; Wirtz et al., 2013).

In this regard, an important conceptual contribution of the study relates to the comparison of doubled and mixed communities. In doubled communities, consumers' perceived benefits are reliable predictors of posting behaviour, in contrast to mixed communities where the significance of these benefits diminishes (functional and altruistic benefits) or is substantially weaker (sharing and social benefits). This finding supports the assumption that consumers engage in cross-categorisation processes which either reinforce the effects of perceived benefits on posting behaviour when the characteristics appear coherent or nullify those effects when the characteristics seem contradictory (Migdal et al., 1998). In other words, consumers' identification with a community is influenced by whether the type of host reinforces or conflicts with the community's content, which appears to support inter-group comparison theory in a consumption community setting (Postmes, Spears, & Lea, 2002). It can further be speculated that additional processes strengthen these inter-community differences. For example, following realistic group-conflict theory (Campbell, 1965; Dovidio, 2013), consumers' perception of conflicting group goals and competition over intra-group authority may lead to disengagement in mixed communities. In relation, recent studies on online consumption communities indicate greater consumer disengagement when the content or purpose of a community is unclear (Brodie, Ilic, Juric, & Hollebeek, 2013; Tsai & Pai, 2013) or when the inherent discourse is disagreeable (Gebauer et al., 2013). The fact that social benefits remained significant in mixed communities may also support previous research which suggests that consumers still experience some social gratification online simply by being able to self-disclose in a public forum regardless of the potential appropriation of their posts or the audience's lack of authenticity (Kim et al., 2008; Sepp, Liljander, & Gummerus, 2011; Weijo, Hietanen, & Mattila, 2014). Additionally, the present finding offers a *post-hoc* explanation for why seminal publications on functional benefits have reported inconclusive or even positive relationships with consumers' posting behaviour (Dholakia et al., 2004, 2009). Previous research findings might have been the result of not accounting for the congruence between a community's host and its content.

The comparison of social benefits across brand and activity communities indicates a similar pattern, confirming the central role of social interactions at both taxonomic levels (e.g. Ganley & Lampe, 2009;

Wang & Fesenmeier, 2004) and highlighting its particular significance in brand communities. In addition, sharing and altruistic benefits were both confirmed as showing stronger effects on consumers' posting behaviour in brand communities rather than activity communities, thus emphasising the importance of helping behaviour (Dholakia et al., 2009). More specifically, it appears that consumers expect their shared content to have greater utility in thematically more homogeneous and value-reinforcing brand communities (Schouten et al., 2007). In comparison, altruistic benefits also have a significant effect on consumers' posting behaviour in brand communities (but not activity communities); yet, the effect is opposite to the predicted direction. While the potential explanation for this surprising result is discussed further below, the difference between altruistic and sharing benefits itself seems to confirm that future studies on helping behaviour in online communities would benefit from distinguishing between consumers' ideologically-driven benefit perceptions and those based on a community's growth in knowledge (Bagozzi & Dholakia, 2006b; Xu & Li, 2014). It is further worth noting that functional benefits did not play a significant role in predicting consumers' posting behaviour in either brand or activity communities, a result which corroborates recent studies that have noted similarly ambivalent results (Park et al., 2014; Tonteri, Kosonen, Ellonen, & Tarkiainen, 2011; Tsai & Pai, 2013). In addition to taking the community's host into account, a further avenue of future research, which may shed more light on these results, is in the analysis of the interplay between the authenticity of a community's existing content quality and consumers' related expectations with regard to their own contributions (Durcikova, & Gray, 2009; Lee et al., 2014).

Finally, although the central focus of the present research was on the taxonomic differences between online consumption communities rather than the directional nature of individual relationships, several overall effects are worth elaborating on. This study generally supports the well-established positive effects of social and sharing benefits on consumers' posting behaviour. Likewise, the negative effect of functional benefits that is evidenced in previous work (e.g. Wang & Fesenmeier, 2004) was confirmed. Scholars do, however, need to be cautious, as these findings vary significantly across different taxonomic levels. The present findings were nevertheless less supportive of the extant literature in relation to the influence of altruistic benefits, since the previously indicated positive influence on posting behaviour could not be confirmed (Baytiyeh & Pfaffman, 2010; Utz, 2009). It can be speculated that the discovered overall negative effect might be due to consumers suppressing their altruism as a response to perceived social loafing (Shiue, Chiu, & Chang, 2010). In other words, if altruistic consumers come to the conclusion that they received little in return for past contributions, they may infer that other community members do not share their value system or ideological orientation and are exploiting others' good intentions. As a consequence, perceived altruistic benefits may actually have a negative effect on consumers' willingness to post and collaborate (Hwang & Bowles, 2012). This line of reasoning may also explain Zhao et al.'s (2013) result that the relationship between altruistic benefits and posting behaviour is significantly

moderated by the extent of a member's previous community participation. However, future studies are needed to further explore the theoretical rationale for this particular relationship, especially since helping behaviour *per se*, as evidenced from the positive effect of sharing benefits, can be a predictor of consumers' contributions.

In sum, this study highlights the importance of accounting for an online consumption community's content focus (taxonomic level 1) and its congruence with the type of host (taxonomic level 2), as this distinction leads to strong variations in consumers' perceived benefits and posting behaviour. The proposed taxonomic framework therefore helps to explain previous inconclusive findings, sheds new light on several established relationships and guides online community scholars in their future sampling decisions.

Managerial implications

This study has several important implications for managers. Firstly, the proposed taxonomy emphasises the need to maintain a transparent community identity, such that the content reinforces the type of community host. Online marketers should concentrate their resources on managing doubled communities, because their influence over consumers' posting behaviour in mixed communities seems unclear. In increasingly sceptical online environments where the authenticity of provided content is critical for a community's effectiveness, a coherency between the content and host plays a key role in a community's success.

Secondly, with regard to the distinction between brand and activity communities, the most distinct feature for managers to focus on is consumers' higher perceived sharing benefits in brand communities. Consumers seem to be more willing to engage in knowledge-sharing which ensures the community's viability when it is focused on a brand rather than an activity. It is therefore recommended that managers of such communities provide explicit opportunities for consumers to give feedback on brand-related content through, for instance, surveys on product designs, opinion polls on future brand developments, or creativity contests that feed into online viral campaigns. In this context, rather than appealing to altruistic benefits, highlighting the percentage of questions answered and posts made could be an effective means to convey that consumers' helping-behaviour is reciprocated in brand communities. In activity communities, altruistic benefits do not play a significant role for consumers and thus appeals for consumers to help others will not be effective in generating content. Instead, it would seem a more fruitful strategy to emphasise how knowledge-sharing will specifically help the community itself, as opposed to potentially non-reciprocating individual members.

Thirdly, community managers are recommended to target and foster consumers' social benefits regardless of the type of community concerned. Social benefits have the strongest influence on consumers' posting behaviour in doubled communities and represent the most reliable behavioural predictor in mixed

communities. Online marketers are therefore recommended to employ tools that encourage social networking, such as member profiles and links to social media networks, in order to promote consumer posting behaviour. A management strategy that focuses on social benefits is further supported by the finding that a perception of high functional benefits is more likely to encourage consumer-lurking rather than posting behaviour. Nevertheless, for doubled communities it is recommended that managers should encourage easy-to-understand comments and open questions that provide every consumer with the opportunity to post, rather than prompting content contributions from just a few community experts.

Overall, this study provides new insights into effective community profiling strategies which will enable marketing managers to target the perceived benefits that most effectively increase consumers' posting behaviour.

Limitations and further research

In view of the scarcity of research on the differences between online consumption communities and the resulting novelty of the present propositions, a few limitations need to be addressed. Although the findings of this study indicate a consistent difference between doubled and mixed communities, these results require further verification to rule out the potential influence of confounding variables that were not accounted for in this study. Future studies should therefore investigate a more exhaustive list of influences on posting behaviour within the community framework proposed here. Authors may, for instance, draw upon antecedents of electronic word-of-mouth behaviour, such as entertainment, product involvement or advice seeking (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004; Sepp et al., 2011; Wolny & Mueller, 2013), in order to clarify how these would vary in relation to the different taxonomic levels. In addition, the present research suggests social categorisation theory as theoretical rationale for the different taxonomic levels, yet an actual instrument to measure related concepts such as social identification (Matzler et al., 2011) was not operationalised and may thus present a fruitful opportunity for future research. Scholars could also meaningfully combine the present taxonomy with McAlexander et al.'s (2002) community integration scale and community success outcomes such as satisfaction, loyalty and advocacy (Jang et al., 2008).

The field would also benefit from a meta-analysis of online consumption communities to shed light on the diversity of analysed community characteristics and the strength of effect sizes of inherent relationships. Alternatively, a useful extension of the present methodology would be a within-subject experimental design, wherein the perceived benefits and posting behaviour of each study participant would be tested for each of the four different types of communities. Together, these may subsequently allow for an extension of the present taxonomy in which hypotheses for interaction effects beyond doubled and mixed communities could be meaningfully derived.

Moreover, the potential self-selection bias that has also been noted in previous studies (e.g. Casaló et al., 2010; Tonteri et al., 2011; Ridings, 2002), restricts the generalisability of the utilised sample. Although the students who selected the communities were not aware of the purpose of this study, complete selection randomness was not achieved since another cohort might have suggested communities with content foci different to those included in the present analysis.

The present sample contains a gender imbalance and thus is further restricted in its generalisability due to an under-representation of women which has also been witnessed in similar past research (e.g. Jang et al., 2008; Xu & Li, 2014). Future studies may therefore concentrate on gender-specific online communities and possibly use qualitative methods for a more in-depth analysis, as done in recent research on a community of mothers (Mumsnet.com) for instance (Phillips & Broderick, 2014). Finally, we used an OLS regression for the analysis while our dependent variable was a single item measured on an ordinal 7-point Likert scale. Although we checked for the stability of the results by alternative estimation approaches like ordinal regression, a potential bias of the estimates because of the OLS assumption violation might remain.

References

- Adjei, M. T., Noble, S. M., & Noble, C. H. (2010). The influence of C2C communications in online brand communities on customer purchase behaviour. *Journal of the Academy of Marketing Science*, 38, 634-653. doi: 10.1007/s11747-009-0178-5
- Algesheimer, R., Dholakia, U. M., & Herrmann, A. (2005). The social influence of brand community: evidence from European car clubs. *Journal of Marketing*, 69(7), 19-34. doi: 10.1509/jmkg.69.3.19.66363
- Archer-Brown, C., Piercy, N. & Joinson, A. (2013). Examining the information value of virtual communities: Factual versus opinion-based message content. *Journal of Marketing Management*, 29, 421-438. doi: 10.1080/0267257X.2012.732599
- Bagozzi, R. P., & Dholakia, U. M. (2006a). Antecedents and purchase consequences of customer participation in small group brand communities. *International Journal of Research in Marketing*, 23, 45-61. doi: 10.1016/j.ijresmar.2006.01.005
- Bagozzi, R. P., & Dholakia, U. M. (2006b). Open source software user communities: a study of participation in linux user groups. *Management Science*, 52, 1099–1115. doi:10.1287/mnsc.1060.0545

- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16, 74-94. doi: 10.1007/BF02723327
- Barasch, A., & Berger, J. (2014). Broadcasting and Narrowcasting: How audience size affects what people share. *Journal of Marketing Research*, 51, 286-299. doi: 10.1509/jmr.13.0238
- Barnes, S. J. & Mattsson, J. (2011). Exploring the fit of real brands in the Second Life virtual world. *Journal of Marketing Management*, 27, 934-958. doi: 10.1080/0267257X.2011.565686
- Baytiyeh, H., & Pfaffman, J. (2010). Open source software: A community of altruists. *Computers in Human Behaviour*, 26, 1345-1354. doi: 10.1016/j.chb.2010.04.008
- Belk, R. (2014a). Digital consumption and the extended self. *Journal of Marketing Management*, 30, 1101-1118. doi: 10.1080/0267257X.2014.939217
- Belk, R. (2014b). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67, 1595-1600. doi: 10.1016/j.jbusres.2013.10.001
- Benlian, A., & Hess, T. (2011). The signaling role of it features in influencing trust and participation in online communities. *International Journal of Electronic Commerce*, 15(4), 7-56. doi: 10.2753/JEC1086-4415150401
- Bhattacharya, C. B., & Sen, S. (2003). Consumer-company identification: A framework for understanding consumers' relationships with companies. *Journal of Marketing*, 67(2), 76-88. doi: 10.1509/jmkg.67.2.76.18609
- Brodie, R. J. R., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66, 105-114. doi: 10.1016/j.jbusres.2011.07.029
- Burgh-Woodman, H., & Brace-Govan, J. (2007). We do not live to buy: Why subcultures are different from brand communities and the meaning for marketing discourse. *International Journal of Sociology and Social Policy*, 27, 193-207. doi: 10.1108/01443330710757230
- Burke, M., Kraut, R., & Joyce, E. (2009). Membership claims and requests: Conversation-level newcomer socialization strategies in online groups. *Small Group Research*, 41, 4-40. doi: 10.1177/1046496409351936
- Campbell, C., & Jovchelovitch, S. (2007). Health, community and development: Towards a social psychology of participation. *Journal of Community & Applied Social Psychology*, 10, 255-270 doi: 10.1002/1099-1298
- Campbell, D. T. (1965). Ethnocentric and other altruistic motives. In D. Levine (Ed.), *The Nebraska Symposium on Motivation* (Vol. 13, pp. 283-311). Lincoln, NE: University of Nebraska Press.
- Carlson, B. D., Suter, T., & Brown, T. J. (2008). Social versus psychological brand community: The role of psychological sense of brand community. *Journal of Business Research*, 61, 284-291. doi: 10.1016/j.jbusres.2007.06.022

- Casaló, L. V., Flavián, C., & Guinalíu, M. (2010). Determinants of the intention to participate in firm-hosted online travel communities and effects on consumer behavioural intentions. *Tourism Management, 31*, 898-911. doi: 10.1016/j.tourman.2010.04.007
- Casaló, L. V., Flavián, C., & Guinalíu, M. (2013). New members' integration: Key factor of success in online travel communities. *Journal of Business Research, 66*, 706-710. doi: 10.1016/j.jbusres.2011.09.007
- Castano, E., Yzerbyt, V., Bourguignon, D., & Seron, E. (2002). Who may enter? The impact of in-group identification on in-group/out-group categorisation. *Journal of Experimental Social Psychology, 38*, 315-322. doi: 10.1006/jesp.2001.1512
- Chan, K. W. & Li, S. Y. (2010). Understanding consumer-to-consumer interactions in virtual communities: The salience of reciprocity. *Journal of Business Research, 63*, 1033-1040. doi: 10.1016/j.jbusres.2008.08.009
- Chau, M., & Xu, J. (2007). Mining communities and their relationships in blogs: A study of online hate groups. *International Journal of Human-Computer Studies, 65*, 57-70. doi: 10.1016/j.ijhcs.2006.08.009
- Chen, C.-J., & Hung, S.-W. (2010). To give or to receive? Factors influencing members' knowledge sharing and community promotion in professional virtual communities. *Information & Management, 47*, 226-236. doi:10.1016/j.im.2010.03.001
- Chiou, W.-B., & Lee, C.-C. (2013). Enactment of one-to-many communication may induce self-focused attention that leads to diminished perspective taking: The case of Facebook. *Judgment and Decision Making, 8*, 372-380. Retrieved from <http://journal.sjdm.org/13/13114/jdm13114.html>
- Chiu, C. M., Hsu, M. H., & Wang, E. T. G. (2006). Understanding sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems, 42*, 1872-1888. doi: 10.1016/j.dss.2006.04.001
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, 95-120. doi: 10.2307/2780243
- Cova, B., & Pace, S. (2006). Brand community of convenience products: New forms of customer empowerment—the case “My Nutella the community”. *European Journal of Marketing, 40*, 1087-1105. doi: 10.1108/03090560610681023
- Cova, B., & White, T. (2010). Counter-brand and alter-brand communities: The impact of Web 2.0 on tribal marketing approaches. *Journal of Marketing Management, 26*, 256-270. doi: 10.1080/02672570903566276
- Crisp, R. J., & Hewstone, M. (2007). Multiple social categorization. In Zanna, M. P. (Ed), *Advances in experimental social psychology, Vol 39* (pp. 163-254). San Diego, US: Elsevier Academic Press. doi:10.1016/S0065-2601(06)39004-1

- Croft, R. (2013). Blessed are the geeks: An ethnographic study of consumer networks in social media, 2006-2012. *Journal of Marketing Management*, 29, 545-561. doi: 10.1080/0267257X.2013.787113
- De St. Aubin, E. (1996). Personal ideology polarity: Its emotional foundation and its manifestation in individual value systems, religiosity, political orientation, and assumptions concerning human nature. *Journal of Personality and Social Psychology*, 71, 152-165. doi: 10.1037/0022-3514.71.1.152
- De Valck, K., van Bruggen, G. H., & Wierenga, B. (2009). Virtual communities: a marketing perspective. *Decision Support Systems*, 47, 185-203. doi: 10.1016/j.dss.2009.02.008
- Dellarocas, C., & Narayan, R. (2006). A statistical measure of a population's propensity to engage in post-purchase online word-of-mouth. *Statistical Science*, 21, 277-285. doi: 10.1214/088342306000000169
- Deutsch, M. & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *The Journal of Abnormal and Social Psychology*, 51, 629-636. doi:10.1037/h0046408
- Dholakia, N. & Reyes, I. (2013). Virtuality as place and process. *Journal of Marketing Management*, 29, 1580-1591. doi: 10.1080/0267257X.2013.834714
- Dholakia, U. M., Bagozzi, R. P., & Pearo, L. (2004). A social influence model of consumer participation in network and small group-based virtual communities. *International Journal of Research in Marketing*, 21, 241-263. doi: 10.1016/j.ijresmar.2003.12.004
- Dholakia, U. M., Blazevic, V., Wiertz, C., & Algesheimer, R. (2009). How customers benefit from participation in firm-hosted virtual P3 communities. *Journal of Service Research*, 12, 208-226. doi: 10.1177/1094670509338618
- Dovidio, J. F. (2013). Bridging intragroup processes and intergroup relations: Needing the twain to meet. *British Journal of Social Psychology*, 52, 1-24. doi: 10.1111/bjso.12026
- Drennan, J. C. & Cornwell, T. B. (2004). Emerging strategies for sponsorship on the internet. *Journal of Marketing Management*, 20, 1123-1146. doi: 10.1362/0267257042405231
- Durcikova, A., & Gray, P. (2009). How knowledge validation processes affect knowledge contribution. *Journal of Management Information Systems*, 25(4), 81-108. doi:10.2753/MIS0742-1222250403
- Eberhard, M. J. W. (1975). The evolution of social behaviour by kin selection. *Quarterly Review of Biology*, 50, 1-33. doi: 10.1086/408298
- Elsbach, K., & Bhattacharya, C. (2001). Defining who you are by what you're not: Organizational disidentification and the National Rifle Association. *Organization Science*, 12, 393-414. doi: 10.1287/orsc.12.4.393.10638
- Fogel, J., & Nehmad, E. (2009). Internet social network communities: Risk taking, trust, and privacy concerns. *Computers in Human Behaviour*, 25, 153-160. doi: 10.1016/j.chb.2008.08.006

- Fornell, C., & Larcker, D. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18, 382-388. doi: 10.2307/3150980
- Gadalla, E., Keeling, K. & Abosag, I. (2013). Metaverse-retail service quality: A future framework for retail service quality in the 3D internet. *Journal of Marketing Management*, 29, 1493-1517. doi: 10.1080/0267257X.2013.835742
- Ganley, D., & Lampe, C. (2009). The ties that bind: Social network principles in online communities. *Decision Support Systems*, 47, 266-274. doi:10.1016/j.dss.2009.02.013
- Gebauer, J., Füller, J., & Pezzee, R. (2013). The dark and the bright side of co-creation: Triggers of member behaviour in online innovation communities. *Journal of Business Research*, 66, 1516-1527. doi: 10.1016/j.jbusres.2012.09.013
- Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the fixed effects analyses of variance and covariance. *Review of Educational Research*, 42, 237-288. doi: 10.3102/00346543042003237
- Godes, D., Mayzlin, D., Chen, Y., Das, S., Dellarocas, C., Pfeiffer, B., ... Verlegh, P. (2005). The firm's management of social interactions. *Marketing Letters*, 16, 415-428. doi: 10.1007/s11002-005-5902-4
- Grant, R., Clarke, R. J. & Kyriazis, E. (2013). Modelling real-time online information needs: A new research approach for complex consumer behaviour. *Journal of Marketing Management*, 29, 950-972. doi: 10.1080/0267257X.2011.621440
- Hair, J. F., Black, W. C., Babin, B., & Anderson, R. E. (2009). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hamilton, K. & Hewer, P. (2010). Tribal mattering spaces: Social-networking sites, celebrity affiliations, and tribal innovations. *Journal of Marketing Management*, 26, 271-289. doi: 10.1080/02672571003679894
- Hamilton, W. D. (1964). The genetical evolution of social behaviour II. *Journal of Theoretical Biology*, 7, 17-52. doi: 10.1016/0022-5193(64)90039-6
- Hansen, S. S. (2013). Exploring real-brand meanings and goods in virtual-world social interaction: Enhanced rewards, rarity, and realism. *Journal of Marketing Management*, 29, 1443-1461. doi: 10.1080/0267257X.2013.821151
- Harper, Y., Konstan, J., & Li, S. (2010). Social comparisons and contributions to online communities: A field experiment on movielens. *American Economic Review*, 100, 1358-1398. Retrieved from <http://www.jstor.org/stable/27871259>
- Harwood, T., & Garry, T. (2010). "It's Mine!" Participation and ownership within virtual co-creation environments. *Journal of Marketing Management*, 26, 290-301. doi: 10.1080/02672570903566292

- Hennig - Thureau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the Internet? *Journal of interactive marketing*, 18, 38-52. doi: 10.1002/dir.10073
- Howard, M. C. (2014). An epidemiological assessment of online groups and a test of a typology: What are the (dis)similarities of the online group types? *Computers in Human Behavior*, 31, 123-133. doi:10.1016/j.chb.2013.10.021
- Hsu, M.H., Ju, T. L., Yen, C.-H., & Chang, C. M. (2007). Knowledge sharing behaviour in virtual communities: The relationship between trust, self-efficacy, and outcome expectations. *International Journal of Human-Computer Studies*, 65, 153-169. doi: 10.1016/j.ijhcs.2006.09.003
- Huang, L. (2010). Social contagion effects in experiential information exchange on bulletin board systems. *Journal of Marketing Management*, 26, 197-212. doi: 10.1080/02672571003594770
- Huang, R., Kim, H. & Kim, J. (2013). Social capital in QQ China: Impacts on virtual engagement of information seeking, interaction sharing, knowledge creating, and purchasing intention. *Journal of Marketing Management*, 29, 292-316. doi: 10.1080/0267257X.2013.766630
- Jahn, B., & Kunz, W. (2012). How to transform consumers into fans of your brand. *Journal of Service Management*, 23, 344-361. doi: 10.1108/09564231211248444
- Jang, H., Olfman, L., Ko, I., Koh, J., & Kim, K. (2008). The influence of on-line brand community characteristics on community commitment and brand loyalty. *International Journal of Electronic Commerce*, 12(3), 57-80. doi: 10.2753/JEC1086-4415120304
- Jeppesen, L. B., & Frederiksen, L. (2006). Why do users contribute to firm-hosted user communities? The case of computer-controlled music instruments. *Organization Science*, 17, 45-63. doi: 10.1287/orsc.1050.0156
- Joyce, E., & Kraut, R. E. (2006). Predicting continued participation in newsgroups. *Journal of Computer-Mediated Communication*, 11, 723-747. doi: 10.1111/j.1083-6101.2006.00033.x
- Jung, T. H., Ineson, E. M. & Green, E. (2013). Online social networking: Relationship marketing in UK hotels. *Journal of Marketing Management*, 29, 393-420. doi: 10.1080/0267257X.2012.732597
- Kankanhalli, A., Tan, B., & Wei, K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quarterly*, 29, 113-143. doi: 10.2307/25148670
- Kim, J. W., Choi, J., Qualls, W. & Han, K. (2008). It takes a marketplace community to raise brand commitment: The role of online communities. *Journal of Marketing Management*, 24, 409-431. doi: 10.1362/026725708X306167
- King, A., Valença, A., Silva, A., Baczynski, T., Carvalho, M. & Nardi, A. (2013). Nomophobia: Dependency on virtual environments or social phobia? *Computers in Human Behavior*, 29, 140-144. doi: 10.1016/j.chb.2012.07.025

- Kozinets, R. (1999). E-tribalized marketing? The strategic implications of virtual communities of consumption. *European Management Journal*, 17, 252-264. doi: 10.1016/S0263-2373(99)00004-3
- Lai, H.-M., & Chen, T. T. (2014). Knowledge sharing in interest online communities: A comparison of posters and lurkers. *Computers in Human Behavior*, 35, 295-306. doi:10.1016/j.chb.2014.02.004
- Laing, A., Keeling, D. & Newholm, T. (2011). Virtual communities come of age: Parallel service, value, and propositions offered in communal online space. *Journal of Marketing Management*, 27, 291-315. doi: 10.1080/0267257X.2011.545679
- Lee, D., Kim, H. S., & Kim, J. K. (2011). The impact of online brand community type on consumer's community engagement behaviours: Consumer-created vs. marketer-created online brand community in online social-networking web sites. *Cyberpsychology, Behaviour and Social Networking*, 14, 59-63. doi: 10.1089/cyber.2009.0397
- Lee, S., Park, D.-H. & Han, I. (2014). New members' online socialization in online communities: The effects of content quality and feedback on new members' content-sharing intentions. *Computers in Human Behavior*, 30, 344-354. doi: 10.1016/j.chb.2013.09.015
- Ling, K., Beenen, G., Ludford, P., Wang, X., Chang, K., Li, X., ... Kraut, R. (2005). Using social psychology to motivate contributions to online communities. *Journal of Computer-Mediated Communication*, 10(4). doi: 10.1111/j.1083-6101.2005.tb00273.x
- Ma, W. W. & Chan, A. (2014). Knowledge sharing and social media: Altruism, perceived online attachment motivation, and perceived online relationship commitment. *Computers in Human Behavior*, 39, 51-58. doi: 10.1016/j.chb.2014.06.015
- Mathwick, C., Wiertz, C., & de Ruyter, K. (2008). Social capital production in a virtual P3 community. *Journal of Consumer Research*, 34, 832-849. doi: 10.1086/523291
- Matzler, K., Pichler, E., Füller, J. & Mooradian, T. A. (2011). Personality, person-brand fit, and brand community: An investigation of individuals, brands, and brand communities. *Journal of Marketing Management*, 27, 874-890. doi: 10.1080/0267257X.2010.543634
- McAlexander, J., Schouten, J., & Koenig, H. (2002). Building brand community. *Journal of Marketing*, 66(1), 38-54. doi: 10.1509/jmkg.66.1.38.18451
- McEvily, B., Perrone, V., & Zaheer, A. (2003). Trust as an organizing principle. *Organization Science*, 14, 91-103. doi: 10.1287/orsc.14.1.91.12814
- Migdal, M. J., Hewstone, M., & Mullen, B. (1998). The effects of crossed categorisation on intergroup evaluations: A meta-analysis. *British Journal of Social Psychology*, 37, 303-324. doi: 10.1111/j.2044-8309.1998.tb01174.x
- Miller, K. D., Fabian, F., & Lin, S. J. (2009). Strategies for online communities. *Strategic Management Journal*, 30, 305-322. doi: 10.1002/smj.735

- Moraes, C., Carrigan, M. & Szmigin, I. (2012). The coherence of inconsistencies: Attitude-behaviour gaps and new consumption communities. *Journal of Marketing Management*, 28, 103-128. doi: 10.1080/0267257X.2011.615482
- Mowen, J. C., & Sujan, H. (2005). Volunteer behaviour: a hierarchical model approach for investigating its trait and functional motive antecedents. *Journal of Consumer Psychology*, 15, 170-182. doi: 10.1207/s15327663jcp1502_9
- Muniz Jr., A. M., & Schau, H. (2005). Religiosity in the abandoned Apple Newton brand community. *Journal of Consumer Research*, 31, 737-747. doi: 10.1086/426607
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23, 242-266. doi: 10.5465/AMR.1998.533225
- O'Sullivan, T. (2010). Dangling conversations: Web-forum use by a symphony orchestra's audience members. *Journal of Marketing Management*, 26, 656-670. doi: 10.1080/0267257X.2011.565684
- O'Sullivan, S. R., Richardson, B. & Collins, A. (2011). How brand communities emerge: The Beamish conversion experience. *Journal of Marketing Management*, 27, 891-912. doi: 10.1080/0267257X.2010.481866
- Oreg, S., & Nov, O. (2008). Exploring motivations for contributing to open source initiatives: The roles of contribution context and personal values. *Computers in Human Behaviour*, 24, 2055-2073. doi: 10.1016/j.chb.2007.09.007
- Ouwensloot, H., & Odekerken-Schröder, G. (2008). Who's who in brand communities – and why? *European Journal of Marketing*, 42, 571-585. doi: 10.1108/03090560810862516
- Palmer, A. & Huo, Q. (2013). A study of trust over time within a social network mediated environment. *Journal of Marketing Management*, 29, 1816-1833. doi: 10.1080/0267257X.2013.803143
- Papagiannidis, S., Pantano, E., See-To, E. W. & Bourlakis, M. (2013). Modelling the determinants of a simulated experience in a virtual retail store and users' product purchasing intentions. *Journal of Marketing Management*, 29, 1462-1492. doi: 10.1080/0267257X.2013.821150
- Park, B., & Rothbart, M. (1982). Perception of out-group homogeneity and levels of social categorisation: Memory for the subordinate attributes of in-group and out-group members. *Journal of Personality and Social Psychology*, 42, 1051-1068. doi: 10.1007/s12144-001-1021-4
- Park, J. H., Gu, B., Leung, A. C. M. & Konana, P. (2014). An investigation of information sharing and seeking behaviors in online investment communities. *Computers in Human Behavior*, 31, 1-12. doi: 10.1016/j.chb.2013.10.002
- Paternoster, R., Brame, R., Mazerolle, P. & Piquero, A. (1998). Using the correct statistical test for the equality of regression coefficients. *Criminology*, 36, 859–866.
- Peterson, N. (1993). Demand sharing: reciprocity and the pressure for generosity among foragers. *American Anthropologist*, 95, 860-874. doi: 10.1525/aa.1993.95.4.02a00050

- Phillips, N. & Broderick, A. (2014). Has Mumsnet changed me? SNS influence on identity adaptation and consumption. *Journal of Marketing Management*, 30, 1039-1057. doi: 10.1080/0267257X.2014.927899
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviours: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26, 513-563. doi: 10.1177/014920630002600307
- Porter, C. (2004). A typology of virtual communities: a multi-disciplinary foundation for future research. *Journal of Computer-Mediated Communication*, 10(1). doi: 10.1111/j.1083-6101.2004.tb00228.x
- Porter, C. E., & Donthu, N. (2008). Cultivating trust and harvesting value in virtual communities. *Management Science*, 54, 113-128. doi: 10.1287/mnsc.1070.0765
- Postmes, T., Spears, R., & Lea, M. (2002). Intergroup differentiation in computer-mediated communication: Effects of depersonalization. *Group Dynamics: Theory, Research, and Practice*, 6(1), 3-16. doi: 10.1037/1089-2699.6.1.3
- Preece, J., & Maloney-Krichmar, D. (2003). Online communities: focusing on sociability and usability. In J. Jacko & A. A. Sears (Eds.), *Handbook of human-computer interaction* (pp. 1-63). New York: Lawrence Erlbaum Associates, 596-620. doi: 10.1201/b11963
- Price, L. L., Feick, L. F., & Guskey, A. (1995). Everyday market helping behaviour. *Journal of Public Policy & Marketing*, 14(2), 255-266. doi: 10.2307/30000133
- Quinton, S. (2013). The community brand paradigm: A response to brand management's dilemma in the digital era. *Journal of Marketing Management*, 29, 912-932. doi: 10.1080/0267257X.2012.729072
- Ren, Y., Kraut, R., & Kiesler, S. (2007). Applying common identity and bond theory to design of online communities. *Organization Studies*, 28, 377-408. doi: 10.1177/0170840607076007
- Ridings, C. (2002). Some antecedents and effects of trust in virtual communities. *The Journal of Strategic Information Systems*, 11, 271-295. doi: 10.1016/S0963-8687(02)00021-5
- Ridings, C., Gefen, D. & Arinze, B. (2006). Psychological barriers: Lurker and poster motivation and behavior in online communities. *Communication of the Association for Information Systems*, 18, 329-325. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.149.1332>
- Rink, F., & Ellemers, N. (2009). Temporary versus permanent group membership: How the future prospects of newcomers affect newcomer acceptance and newcomer influence. *Personality and Social Psychology Bulletin*, 35, 764-75. doi: 10.1177/0146167209333177
- Sassenberg, K. (2002). Common bond and common identity groups on the internet: Attachment and normative behaviour in on-topic and off-topic chats. *Group Dynamics: Theory, Research, and Practice*, 6(1), 23-27. doi: 10.1037/1089-2699.6.1.27

- Scaraboto, D., Carter-Schneider, L. & Kedzior, R. (2013). At world's end: Exploring consumer-marketer tensions in the closure of adverworlds. *Journal of Marketing Management*, 29, 1518-1541. doi: 10.1080/0267257X.2013.833968
- Schau, H. J., Jr., A. M. M. & Arnould, E. J. (2009). How brand community practices create value. *Journal of Marketing*, 73(9), 30-51. doi: 10.1509/jmkg.73.5.30
- Schlosser, A. E. (2005). Contribution versus lurking: communicating in a multiple audience context. *Journal of Consumer Research*, 32, 260-265. doi: 10.1086/432235
- Schneider, A., von Krogh, G., & Jäger, P. (2013). "What's coming next?" Epistemic curiosity and lurking behaviour in online communities. *Computers in Human Behaviour*, 29, 293-303. doi: 10.1016/j.chb.2012.09.008
- Schouten, J. W., McAlexander, J. H., & Koenig, H. F. (2007). Transcendent customer experience and brand community. *Journal of the Academy of Marketing Science*, 35, 357-368. doi: 10.1007/s11747-007-0034-4
- Schwämmlein, E., & Wodzicki, K. (2012). What to tell about me? Self-presentation in online communities. *Journal of Computer-Mediated Communication*, 17, 387-407. doi: 10.1111/j.1083-6101.2012.01582.x
- Sepp, M., Liljander, V. & Gummerus, J. (2011). Private bloggers' motivations to produce content—a gratifications theory perspective. *Journal of Marketing Management*, 27, 1479-1503. doi: 10.1080/0267257X.2011.624532
- Shen, Y. C., Huang, C.-Y., Chu, C.-H., & Liao, H.-C. (2010). Virtual community loyalty: An interpersonal-interaction perspective. *International Journal of Electronic Commerce*, 15(1), 49-74. doi: 10.2753/JEC1086-4415150102
- Shiue, Y. C., Chiu, C. M., & Chang, C. C. (2010). Exploring and mitigating social loafing in online communities. *Computers in Human Behaviour*, 26, 768-777. doi: 10.1016/j.chb.2010.01.014
- Stokburger-Sauer, N. (2010). Brand community: drivers and outcomes. *Psychology & Marketing*, 27, 347-368. doi: 10.1002/mar.20335
- Thompson, M. (2005). Structural and epistemic parameters in communities of practice. *Organization Science*, 16, 151-164. doi: 10.1287/orsc.1050.0120
- Tonteri, L., Kosonen, M., Ellonen, H.-K., & Tarkiainen, A. (2011). Antecedents of an experienced sense of virtual community. *Computers in Human Behaviour*, 27, 2215-2223. doi: 10.1016/j.chb.2011.06.018
- Tsai, H. T., & Pai, P. (2013). Explaining members' proactive participation in virtual communities. *International Journal of Human-Computer Studies*, 71, 475-491. doi: 10.1016/j.ijhcs.2012.12.002
- Utz, S. (2009). "Egoboo" vs. altruism: The role of reputation in online consumer communities. *New Media & Society*, 11, 357-374. doi: 10.1177/1461444808101616

- Vanbeselaere, N. (1991). The different effects of simple and crossed categorisations: A result of the category differentiation process or of differential category salience? *European Review of Social Psychology*, 2(1), 247-278. doi: 10.1080/14792779143000088
- Wang, G. A., Jiao, J., Abrahams, A. S., Fan, W., & Zhang, Z. (2013). ExpertRank: A topic-aware expert finding algorithm for online knowledge communities. *Decision Support Systems*, 54, 1442-1451. doi: 10.1016/j.dss.2012.12.020
- Wang, Y., & Fesenmaier, D. R. (2004). Modeling participation in an online travel community. *Journal of Travel Research*, 42, 261-270. doi:10.1177/0047287503258824
- Weijo, H., Hietanen, J. & Mattila, P. (2014). New insights into online consumption communities and netnography. *Journal of Business Research*, 67, 2072-2078. doi: 10.1016/j.jbusres.2014.04.015
- Wiertz, C., & de Ruyter, K. (2007). Beyond the call of duty: Why customers contribute to firm-hosted commercial online communities. *Organization Studies*, 28, 347-376. doi: 10.1177/0170840607076003
- Wirtz, J., den Ambtman, A., Bloemer, J., Horváth, C., Ramaseshan, B., van de Klundert, J., ... & Kandampully, J. (2013). Managing brands and customer engagement in online brand communities. *Journal of Service Management*, 24, 223-244. doi: 10.1108/09564231311326978
- Wolny, J. & Mueller, C. (2013). Analysis of fashion consumers' motives to engage in electronic word-of-mouth communication through social media platforms. *Journal of Marketing Management*, 29, 562-583. doi: 10.1080/0267257X.2013.778324
- Xu, B., & Li, D. (in press). An empirical study of motivations for content contribution and community participation in Wikipedia. *Information & Management*. doi: 10.1016/j.im.2014.12.003
- Yen, H. R., Hsu, S. H.-Y. & Huang, C.-Y. (2011). Good soldiers on the Web: Understanding the drivers of participation in online communities of consumption. *International Journal of Electronic Commerce*, 15(4), 89-120. doi: 10.2753/JEC1086-4415150403
- Zaglia, M. E. (2013). Brand communities embedded in social networks. *Journal of Business Research*, 66, 216-223. doi: 10.1016/j.jbusres.2012.07.015
- Zhao, K., Stylianou, A. C., & Zheng, Y. (2013). Predicting users' continuance intention in virtual communities: The dual intention-formation processes. *Decision Support Systems*, 55, 903-910. doi: 10.1016/j.dss.2012.12.026

Appendix

Appendix 1 Scale items and factor loadings.

Construct	Factor Loadings
Social benefits	
The social aspects of this community are important to me.	.85
In this community, I get to know other people.	.82
I enjoy the conversational interactions in this community.	.75
Functional benefits	
The information provided in this community is valuable.	.88
The information provided in this community is useful.	.90
This community provides information at an appropriate level of detail.	.84
Sharing benefits	
Sharing my knowledge will be helpful to the successful functioning of this community.	.85
Sharing my knowledge will help this community continue its operation in the future.	.86
Sharing my knowledge will help this community accumulate or enrich knowledge.	.82
Sharing my knowledge will help this community grow.	.87
Altruistic benefits	
It is important for me to give to others.	.82
It is important for me to be unselfish.	.72
It is important for me to help other people.	.81
It is important for me to share what I have.	.72

